

# SHELTERBELT WEED CONTROL

**Extension Bulletin W-1097, "Weed Control in Tree Plantings" provides additional information.**

Read and follow label directions. Most herbicides can injure trees if applied in a manner inconsistent with label directions. Only use herbicide formulations that are labeled in shelterbelts and only as described on the label. Eliminate perennial weeds prior to planting trees. Refer to label for application method (broadcast, over-the-top, directed), timing (spring or fall), and tolerant and susceptible tree species.

Herbicide	Product/A (ai/A)	Remarks
<b>Alion</b> (indaziflam <sup>29</sup> )	<b>5 to 6.5 fl oz EC</b> (0.065 to 0.085 lb)	<b>Residual</b> , soil-applied herbicide. Apply PRE in a broadcast, or directed application to soil when around desirable tree species. Adjust rate for soil type. Refer to label for additional information.
<b>Casoron</b> (dichlobenil)	<b>100 to 200 lb 4G</b> (4 to 8 lb)	Volatile, especially on wet soil. Preemergence herbicide for control of annual and perennial weeds in new plantings established at least 4 weeks. Most effective when applied in November or March just before rain or snow to activate and move dichlobenil into the soil.
<b>Fusilade DX</b> (fluazifop-P <sup>1</sup> )	<b>1 to 1.5 pt EC</b> (0.25 to 0.38 lb)	Translocated, postemergence, non-residual herbicide for control of annual and perennial grasses. Spot spray or apply over-the-top of woody species. Add oil additive at 1 qt/A.
Glyphosate <sup>9</sup>	<b>2% solution or</b> Up to 1.125 lb ae <b>See Remarks.</b>	Non-selective, non-residual, translocated, postemergence herbicide. Effective on annual and perennial plants. Directed spray only. Add AMS at 8.5 lb/100 gal. Avoid contact to desirable species. A4-7 A16 X1
<b>Goal</b> (oxyfluorfen <sup>14</sup> )	<b>5 to 10 pt 1.6EC</b> <b>4 to 8 pt 2XL</b> (1 to 2 lb)	Residual, preemergence or contact herbicide for control of broadleaf weeds including kochia and some grass weeds. <b>General:</b> Do not incorporate in soil. Apply POST with NIS at 0.25% v/v. Can be applied with a residual herbicide or as a split application. <b>Conifers:</b> Apply pre-transplant, POST or POST-directed prior to bud-break or after new foliage has hardened off. <b>Hardwoods:</b> Apply pre-transplant or POST-directed prior to bud-break. Spray only the base of deciduous trees and <u>not over- the-top</u> . If a non-dormant application is required, apply after new foliage has expanded and hardened off and NOT during periods of new growth. Avoid direct or indirect spray contact with foliage of deciduous trees.
<b>Karmex/Direx</b> (diuron <sup>7</sup> )	<b>2.5 to 5 lb DF</b> (2 to 4 lb)	Preemergence herbicide for plantings established at least one year. Apply as directed spray. Tolerance of labeled species is fair to very good. Do not use on light soil or in low, wet areas.
<b>Plateau</b> (imazapic <sup>3</sup> )	<b>8 to 12 fl oz SL</b> (2 to 3 oz ae)	Add MSO at 2 qt/A. Controls many broadleaf weeds including leafy spurge. Can spray in and around tree species. Do not use on new plantings or seedling trees. Fall treatment will kill lilac and will cause temporary yellowing of spruce candles. Higher rates will reduce grass stands. Refer to label for list of tolerant tree species. Use caution on trees not listed on label.
<b>Poast/Vantage</b> (sethoxydim <sup>1</sup> )	<b>1.5 to 2.5 pt Poast</b> <b>2 to 3 pt Vantage</b>	Translocated, postemergence, non-residual herbicide for control of annual and perennial grasses. Spot spray or apply over-the-top of most woody species. Add oil additive at 1 qt/A.
Princep / generic simazine <sup>5</sup>	<b>2 to 4 qt L</b> <b>2.2 to 4.4 lb DF</b> (2 to 4 lb)	<b>Use only on tree plantings at least three years old.</b> Preemergence herbicide that is most effective on annual broadleaf weeds. For adequate annual grass control apply with a preemergence, residual grass herbicide. Apply in fall or spring in full or split-rate applications. Use high rate in fine textured soils. Refer to label for list of registered tree species.
<b>Rely 280 + AMS</b> (glufosinate <sup>10</sup> )	<b>48 to 82 fl oz SL +</b> 3 lbs/A (0.88 to 1.5 lb)	Non-selective, non-residual, contact herbicide. Directed application only. Controls many annual and perennial weeds. Use 1.7 fl oz/gal for spot application. Use 48 fl oz/A for weeds <3 inches, 56 fl oz/A for weeds <6 inches, and 56-82 fl oz/A for weeds >6 inches + tillered grasses.
Stinger / generic clopyralid <sup>4</sup>	<b>0.25 to 0.67 pt SL</b> (0.1 to 0.25 lb ae)	<b>Safe to only some conifer species.</b> Translocated, postemergence, broadleaf herbicide. Effective on weeds in the legume, smartweed (polygonum) and sunflower (composite) families. Provides excellent control of Canada thistle and knapweeds. Apply to actively growing weeds.
<b>Stomp</b> <b>Pendulum</b> (pendimethalin <sup>3</sup> )	<b>2 to 4 qt EC</b> <b>3.3 to 6.6 lb WDG</b> (2 to 4 lb)	Preemergence herbicide for residual control of annual grasses and some small-seeded broadleaf weeds. Apply before bud break to avoid potential growth suppression. Apply with preemergence broadleaf herbicide for broad spectrum annual weed control.
Treflan / generic trifluralin <sup>3</sup>	<b>1 to 2 pt EC</b> (0.5 to 1 lb) <b>80 lb 5G</b> (4 lb)	Apply PPI for new plantings or established trees. Gives season-long control of many annual grasses and some broadleaf weeds. Does not control weeds in the sunflower, legume or mustard family. Poor perennial weed control but may suppress field bindweed. Cultivation may be required for broadleaf weed control the first season. Apply with a residual preemergence broadleaf herbicide for broad-spectrum weed control.
2,4-D <sup>4</sup> amine	<b>1 to 2 qt 4EC/SL</b> (1 to 2 lb ae)	Translocated, postemergence, broadleaf herbicide. Directed application only. Used to reduce infestations of perennial weeds. Broadleaf plants and deciduous trees very sensitive. Avoid drift to desirable species. Use only amine formulations. Use low pressure, coarse spray droplets and <b>apply only in calm weather.</b>

# TOTAL VEGETATION WEED CONTROL

Apply herbicides to bare soil rather than dead plants will improve herbicide performance. Add glyphosate to kill existing vegetation if present. Apply high rates followed by lower rates in subsequent years will generally give satisfactory extended control. For short term bare-ground control, non-residual herbicides can be applied several times per year. General precautions when using soil sterilant are:

1. Do not move treated soil and avoid applying where wind or water will move the treated soil.
2. Avoid spray drift. Apply during low wind, reduce spray pressure, and select nozzles that produce larger droplets.
3. Do not apply where roots of desirable vegetation may extend into the treated area.
4. Be familiar with and know the risks of the product to be applied.
5. Use a combination of herbicides with different modes of action to avoid resistant weeds.

Herbicide	Product/A (lb ai/A)	Remarks												
Diuron <sup>7</sup>	<b>1 to 8 gal/5 to 15 lb</b> (4 to 32 lb)	Refer to label for use in irrigation ditches. Higher rates needed for perennial grasses and broadleaf weeds. Deep rooted perennials will require retreatment. <b>Long residual.</b> A17												
Glyphosate <sup>9</sup>	Up to 1.5 lb ae <b>See Remarks.</b>	Non-selective, <b>non-residual</b> , translocated herbicide. Effective on annual and perennial grass and broadleaf plants. Add 2,4-D or dicamba for broad-spectrum weed control. Add AMS at 8.5 lbs/100 gal. A4-6 T10												
<b>Hyvar X</b> <b>Hyvar X-L</b> (bromacil <sup>7</sup> )	<b>3 to 15 lb DF</b> <b>0.75 to 6 gal L</b> (2.4 to 12 lb DF 1.5 to 12 lb L)	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;">Annual weeds</td> <td style="width: 33%;">Perennial weeds</td> <td style="width: 33%;">Woody plants</td> </tr> <tr> <td>Hyvar X</td> <td>3 to 6 lb DF</td> <td>7 to 15 lb</td> <td>7 to 15 lb</td> </tr> <tr> <td>Hyvar X-L</td> <td>1 to 3 gal/A</td> <td>3 to 6 gal/A</td> <td>3 to 6 gal/A</td> </tr> </table> Apply PRE or EPOST. Non-corrosive and non-volatile. Refer to label for tank-mix options. <b>Bromacil can move horizontally in soil after application. Long residual.</b>		Annual weeds	Perennial weeds	Woody plants	Hyvar X	3 to 6 lb DF	7 to 15 lb	7 to 15 lb	Hyvar X-L	1 to 3 gal/A	3 to 6 gal/A	3 to 6 gal/A
	Annual weeds	Perennial weeds	Woody plants											
Hyvar X	3 to 6 lb DF	7 to 15 lb	7 to 15 lb											
Hyvar X-L	1 to 3 gal/A	3 to 6 gal/A	3 to 6 gal/A											
Krovar I / generic bromacil <sup>7</sup> & diuron <sup>7</sup>	<b>6 to 16 lb DF</b> (4.8 to 12.8 lb)	Apply PRE for annual weeds. Requires moisture for activation. Refer to label for registered tank-mixes. <b>Bromacil can move horizontally in soil after application. Long residual.</b>												
Krovar I + <b>Perspective</b> (bromacil <sup>7</sup> & diuron <sup>7</sup> + acpc <sup>4</sup> & chlorsulf <sup>2</sup> )	<b>6 lb DF + 11 oz DF</b> (2.4 + 2.4 lb + 4.4 oz + 1.8 oz)	Add MSO adjuvant at 1 to 2 pt/A. Apply PRE for control of annual grass and broadleaf weeds. Requires moisture for activation. Add glyphosate if emerged grass and broadleaf weeds are present. <b>Bromacil can move horizontally in soil after application. Long residual.</b>												
<b>Landmark MP</b> (sulfometuron <sup>2</sup> & chlorsulfuron <sup>2</sup> )	<b>1 pkg/5 A DF to</b> <b>1 pkg/2.5 A DF</b> (1.5 to 3 oz)	Apply PRE to EPOST for broadleaf weeds. Will control/suppress leafy spurge. May be applied with Krovar I DF or Hyvar X to control ALS resistant weeds. <b>Long residual.</b>												
<b>Liberty 280</b> (glufosinate <sup>10</sup> )	<b>3 to 5 pt SL</b> (0.88 to 1.46 lb)	Non-selective, <b>non-residual</b> contact herbicide for use in non-crop and farmsteads. Use 4 fl oz/gal for spot application. Apply with AMS at 3 lb/A. B9												
<b>Oust</b> (sulfometuron <sup>2</sup> )	<b>2 to 4 oz XP</b> (1.5 to 3 oz)	Use high rate in high moisture areas except in residential properties. Will control leafy spurge at 3 oz/A. Do not spray near water. <b>Long residual.</b>												
paraquat <sup>22</sup> <b>RUP</b>	<b>2 to 2.7 ptSL</b> (0.75 to 1 lb)	Non-selective, <b>non-residual</b> , contact herbicide. Controls only top-growth of perennial species. Add NIS and repeat application as necessary. Avoid drift and contact with desirable species.												
<b>Plateau</b> (imazapic <sup>2</sup> )	<b>8 to 12 fl oz SL</b> (2 to 3 oz ae)	Add MSO at 2 pt/A. Controls many broadleaf weeds including leafy spurge. Use up to 12 fl oz in combination with other total vegetation control herbicides. T16												
<b>Pramitol 25E</b> (prometon <sup>7</sup> )	<b>5 to 10 gal EC</b> (10 to 15 lb)	Use 5 to 7.5 gal/A for annual and susceptible perennial weeds and 7.5 to 10 gal/A for hard-to-kill perennial weeds. Apply before weeds emerge or EPOST. <b>Long residual.</b>												
<b>Spike</b> (tebuthiuron <sup>7</sup> )	<b>1.25 to 5 lb 80DF</b> (1 to 4 lb)	For long-term woody plant and some broadleaf weed control. Avoid application in areas with surface or high water tables. Do not exceed 4 lb ai/A in a three year period. See label for specific species controlled and grazing and haying restrictions. <b>Long residual.</b>												
<b>Throttle</b> (chlorsulf&sulfomet & sulfentrazone <sup>14</sup> )	<b>12.5 oz DF</b> (1.125 oz & 2.25 oz & 6 oz)	Provides residual PRE and POST control of annual weeds and POST control of perennial weeds. <b>Long residual.</b>												

# TROUBLESOME WEEDS IN PASTURE, RANGELAND, AND NONCROPLAND

Weed	Herbicide	Product/A	Remarks and Paragraphs
Buckbrush/ West. snowberry	2,4-D <sup>4</sup> amine or ester Chlorsulf <sup>2</sup> &Metsulf <sup>2*</sup> + oil adj. Chaparral <sup>2,4</sup>	2 to 3 qt 4EC/SL 2 oz DF + 1 to 2 pt/A 2 to 3 oz	Apply 2,4-D in spring only. Apply anytime during the growing season. Apply in spring to early summer. The addition of 2,4-D increases control at lower use rates.
Baby's breath	Metsulf <sup>2*</sup> + Dicamba <sup>4</sup> +oil adj.	0.3 to 0.6 oz DF + 1 pt + 1-2 pt/A	Best when applied from bolting to pre-flower.
Black henbane	Metsulfuron <sup>2*</sup> 2*+ oil adjuvant Dicamba <sup>4</sup> or Tordon <sup>4</sup> + oil adj	0.5 to 1 oz DF + 1 to 2 pt/A 1 to 3 pt + 1 to 2 pt/A	Apply herbicides during rosette to early flower. Tordon at 1 to 2 pt: Mix with 2,4-D at 1 to 2 pt/A.
Burdock	2,4-D <sup>4</sup> amine or ester Chlorsulf <sup>2</sup> &Metsulf <sup>2*</sup> + oil adj. Dicamba <sup>4</sup> + oil adjuvant	1 qt 4EC/SL 0.25 to 0.5 oz DF + 1 to 2 pt/A 1 pt + 1 to 2 pt/A	Early summer prior to flowering.
Curly dock	Chlorsulf <sup>2</sup> &Metsulf <sup>2*</sup> + oil adj. Dicamba <sup>4</sup> + oil adjuvant Metsulfuron <sup>2*</sup> + oil adjuvant Starane <sup>4</sup> 1.5/2.8EC/40DG Tordon <sup>4</sup> + 2,4-D <sup>4</sup> <b>RUP</b>	0.25 to 0.5 oz DF + 1 to 2 pt/A 0.5 to 1 pt + 1 to 2 pt/A 0.1 oz + 1 to 2 pt/A 0.67 pt / 0.35 pt / 5 oz 0.5 to 1 pt + 1 to 2 pt 4EC/SL	Early spring to bolting is best. Herbicides will control curly dock when treated later in the summer but will need higher rates.
Dame's rocket	2,4-D <sup>4</sup> or MCPA <sup>4</sup> + oil adj. Metsulfuron <sup>2*</sup> + oil adj.	1 to 1.5 pt + 1 to 2 pt/A 1 oz + 1 to 2 pt/A	Apply in fall to rosette or early spring prior to bolting. Avoid spraying tree bark or foliage.
Foxtail barley	Plateau <sup>2</sup> + MSO + 28% UAN	8 to 12 fl oz + 1.5 pt + 1 qt	
Goldenrod	2,4-D <sup>4</sup> amine or ester Chlorsulf <sup>2</sup> &Metsulf <sup>2*</sup> + oil adj. Metsulfuron <sup>2*</sup> + oil adjuvant Tordon <sup>4</sup> + 2,4-D <sup>4</sup> <b>RUP</b>	3 to 6 pt 4EC/SL 1 oz DF + 1 to 2 pt/A 0.33 to 0.5 oz + 1 to 2 pt/A 1 pt + 1 qt 4EC/SL	Mid-June through flowering when plants are not stressed.
Gumweed	2,4-D <sup>4</sup> amine or ester Chlorsulf <sup>2</sup> &Metsulf <sup>2*</sup> + oil adj. Metsulfuron <sup>2*</sup> + oil adjuvant	1.5 to 2 pt 4EC/SL 1 oz DF + 1 to 2 pt/A 1 oz + 1 to 2 pt/A	Early spring when plants are not stressed.
Halogeton	2,4-D <sup>4</sup> amine or ester Metsulfuron <sup>2*</sup> + oil adjuvant Plateau <sup>2</sup> + MSO + 28% UAN	1 to 2 pt 4EC/SL 0.75 oz DF + 1 to 2 pt/A 1 to 3 oz + 1.5 pt + 1 qt	2,4-D: Apply very early in spring prior to flowering. Escort: Apply to actively growing plants. Apply PRE to POST. Use higher rates for POST.
Hoary cress	Metsulfuron <sup>2*</sup> + oil adj.	1 oz + 0.25% v/v + 1 to 2 pt/A	Apply in spring prior to flowering. Difficult-to-control perennial requiring followup treatments.
Houndstongue	2,4-D <sup>4</sup> amine or ester Metsulfuron <sup>2*</sup> + oil adjuvant Plateau <sup>2</sup> + MSO + 28% UAN	2 pt 4EC/SL 1 to 2 oz + 1 to 2 pt/A 8 to 12 oz + 1.5 pt + 1 qt	2,4-D: Apply to 1 <sup>st</sup> year plants from May to June. Met: Very effective through the growing season. Plateau: Controls plants applied PRE and POST.
Mint	Chlorsulf <sup>2</sup> &Metsulf <sup>2*</sup> + oil adj. Dicamba <sup>4</sup> + 2,4-D <sup>4</sup> + oil adj. Metsulfuron <sup>2*</sup> + oil adjuvant Tordon <sup>4</sup> + 2,4-D <sup>4</sup> <b>RUP</b>	1 oz DF + 1 to 2 pt/A 1 pt + 1 qt 4EC/SL + 1 to 2 pt/A 1/3 to 1/2 oz + 1 to 2 pt/A 1 pt + 1 qt 4EC/SL	Apply mid-June through flowering when plants are not stressed.
Poison ivy	Crossbow <sup>4,4</sup> Garlon <sup>4</sup> 3A or 4	1.5 gal 3 to 4 pt or 2 to 3 pt	Apply to plants actively growing.
Prick. pear cactus	Tordon <sup>4</sup> <b>RUP</b>	2 pt	Apply late-spring to early summer.
Ragweed	Chlorsulf <sup>2</sup> &Metsulf <sup>2*</sup> + oil adj. Tordon <sup>4</sup> + 2,4-D <sup>4</sup> <b>RUP</b>	0.25 oz DF + 1 to 2 pt/A 1 pt + 1 qt 4EC/SL	Apply mid to late summer.
Sagebrush, fringed	2,4-D <sup>4</sup> ester Chlorsulf <sup>2</sup> &Metsulf <sup>2*</sup> + oil adj. Tordon <sup>4</sup> <b>RUP</b>	2 to 4 pt 4EC/SL 1 oz DF + 1 to 2 pt/A 1 to 2 pt	Best when applied in May. Plants should be leafed out and growing in good moisture conditions.
Sagebrush	2,4-D <sup>4</sup> ester	2 to 4 pt 4EC/SL	
Sagewort, Green	2,4-D <sup>4</sup> ester Tordon <sup>4</sup> + 2,4-D <sup>4</sup> <b>RUP</b>	4 pt 4EC/SL 1 pt + 1 qt 4EC/SL	
Swamp smartweed	Dicamba <sup>4</sup> + oil adjuvant Metsulfuron + oil adjuvant Tordon <sup>4</sup> + 2,4-D <sup>4</sup> <b>RUP</b> Weedmaster <sup>4,4*</sup>	0.5 to 1 pt + 1 to 2 pt/A 0.1 oz + 1 to 2 pt/A 1 pt + 1 qt 4EC/SL 1 pt	Apply to plants 1 to 4 inches tall.  Apply in mid to late summer.
Trees, volunteer	Crossbow <sup>4,4</sup> Tordon+2,4-D+Remedy <sup>4</sup> <b>RUP</b>	2% solution or 2 gal/A 2% or 1 pt + 1 qt 4EC/SL + 1 pt	Add NIS at 0.5% v/v. Apply after tree leaves have fully expanded.
Wild licorice	Milestone <sup>4</sup> Transline <sup>4</sup>	7 pt/A 1 pt /A	Apply when plants are actively growing.

\* Or generic equivalent

# TROUBLESOME WEEDS IN CROPLAND AND OTHER AREAS

Weed	Herbicide	Product/A	Remarks and Paragraphs
<b>Alfalfa</b>	2,4-D <sup>4</sup> + Dicamba <sup>4</sup> + MSO Stinger <sup>4*</sup> or Curtail <sup>4,4*</sup> +MSO	2 pt 4EC/SL+0.5 pt+1.5 pt/A 0.67 pt or 4 pt + 1.5 pt/A	Roundup / generics (2 to 4 pt/A) is less effective.
<b>Buffalobur</b>	Banvel <sup>4*</sup> + MSO adjuvant	0.5 pt + 1.5 pt/A	Cobra, 2,4-D, MCPA, and Pursuit are less effective.
<b>Cleavers/Catchweed bedstraw</b>	Starane <sup>4*</sup> 1.5/2.8EC/40DG Affinity <sup>2,2*</sup> + NIS Orion <sup>2,4</sup> + NIS	0.67 pt / 0.35 pt / 5 oz DF or SG - See label for rate. 17 oz	Liberty is less effective. Apply Affinity and Orion with NIS at 1 qt/100 gal water.
<b>Cattail</b>	Glyphosate <sup>9</sup> (only 4 lb ae/gal no adjuvant formulations) Arsenal <sup>2</sup> + MSO adjuvant Raptor <sup>2</sup> + MSO adjuvant	4.5 pt of 4 lb ae/gal conc. 2 to 4 pt (1% v/v solution) 4 to 5 fl oz + 1.5 pt/A	Add approved NIS at 1 qt/100 gal water. Apply at early to full bloom stage = late July to mid August. A3-8 Apply to cattail with green foliage/after leaf elongation. May require retreatment.
<b>Curly dock</b>	Stinger <sup>4*</sup> or Curtail <sup>*</sup> Express <sup>2*</sup> + oil adjuvant Harmony <sup>2*</sup> + oil adjuvant	0.67 pt or 2 pt 0.5 oz SG + 1.5 pt/A 0.9 oz SG + 1.5 pt/A	Stinger/Curtail has crop rotation restrictions. Add MSO at 1.5 pt/A. Apply to small plants. SU mixtures of thifensulfuron & tribenuron are also effective.
<b>Common milkweed</b>	Roundup <sup>9*</sup> + NIS + AMS Express <sup>2*</sup> + 2,4-D <sup>4</sup> +Banvel <sup>4*</sup>	2%+1 qt/100 gal+8.5 lbs/100 0.33 oz DF + 0.75 pt + 2 fl oz	Glyt - Suppression only. Will require retreatment. A3-8 Exp+2,4-D+Banvel - Apply high rates for spot treatment.
<b>Dandelion</b>	2,4-D <sup>4</sup> + MSO Stinger <sup>4*</sup> Dicamba <sup>4</sup> + MSO Express <sup>2*</sup> + MSO Glyphosate <sup>9</sup> + NIS + AMS Callisto or Impact or Laudis <sup>27</sup>	2 to 4 pt + 1.5 pt/A Refer to premix label. 0.5 pt. Apply with 2,4-D DF or SG - See label for rate. 1 to 3 lb ae 3 fl oz or 0.75 fl oz or 3 fl oz	2,4-D - Best control when applied in fall. Stinger - Apply premixes - Curtail and WideMatch. Banvel - Residue may injure next crop to be planted. Express - Partial control. Apply with 2,4-D. Roundup - Best control when applied in fall. Callisto/others - Partial control. Add MSO at 1.5 qt/A.
<b>Equisetum (Horsetail) (Scouring rush)</b>	MCPA <sup>4</sup> + MSO Permit <sup>2</sup> + MSO Python <sup>2</sup> + MSO Remedy/Garlon <sup>4</sup> + MSO Glean <sup>2*</sup> + MSO	1 qt/A 4EC/SL + 1.5 pt/A 1.33 oz DF + 1.5 pt/A 1.33 oz DF + 1.5 pt/A 2 qt + 1 to 1.5 pt/A 3 oz DF + 1.5 pt/A	Glyphosate is less effective. Retreatment necessary. Permit - Apply two applications each at 1.33 oz/A. Python - Apply with oil adjuvant PRE or POST. Remedy/Garlon and MCPA - Apply fall or spring. Glean/Telar/Oust - Will result in total vegetation control.
<b>False chamomile</b>	SUs <sup>2</sup> / Orion + adj. Glyphosate <sup>9</sup> + NIS + AMS Valor <sup>14</sup> (Fall applied)	See label + NIS or oil adj. 1 qt + 1 qt/100 + 8.5 lbs/100 2 to 3 oz WDG	SU herbicides - Oil adjuvant will increase control. Roundup - Avoid spraying desirable vegetation. A3-8 PRE activity.
<b>Flax, volunteer</b>	Cobra / Blazer + oil adjuvant Flexstar <sup>14</sup> /Reflex <sup>14</sup> + oil adj. Facet L <sup>4,26</sup> + MSO Pursuit <sup>2</sup> + Sencor <sup>5*</sup> (PRE) Starane <sup>4*</sup> 1.5/2.8EC/40DG Affinity <sup>2*</sup> + NIS Express <sup>2*</sup> + 2,4-D <sup>4</sup> + NIS	See label + 1 to 2 pt/A 0.5 to 0.75 pt + 1 to 2 pt/A 0.33 oz DF + 1.5 pt/A 1 to 2 fl oz + 0.375 0.67 pt / 0.35 pt / 5 oz DF or SG - See label for rate. DF or SG + 0.75 pt 4EC/SL	Apply to flax < 3inches tall. Apply to small plants. Use only east of Hwy 281. Facet - see label for crop rotation restrictions. Add oil adjuvant at 1 to 2 pt/A Starane - No adjuvant needed. Affinity - Add NIS at 1 qt/100 gal water. Express - Add NIS at 1 qt/100 gal water.
<b>Hemp dogbane</b>	2,4-D <sup>4</sup> + Banvel <sup>4*</sup> + MSO Dicamba <sup>9</sup> + NIS + AMS	1 to 2 pt 4EC/SL + 1.5 pt 2% v/v	Banvel at 2 pt/A may will injure some crops planted the next year. A3-8
<b>Horseweed (Marestail)</b>	2,4-D <sup>4</sup> + MSO Callisto / Impact / Laudis <sup>27</sup> FirstRate <sup>2</sup> + MSO Harmony <sup>2*</sup> + MSO Hornet <sup>2,4</sup> + MSO Python <sup>2</sup> + MSO Spartan <sup>14</sup> + MSO Valor <sup>14</sup> + MSO	1 to 2 pt + 1.5 pt/A 3 fl oz / 0.75 fl oz / 2 to 3 fl oz 0.3 oz WDG + 1.5 pt/A See label for rate + 1.5 pt/A 3 to 4 oz WDG + 1.5 pt/A 1 oz WDG + 1.5 pt/A 3 to 6 fl oz + 1.5 pt/A 2 to 3 oz WDG + 1.5 pt/A	2,4-D (preplant) to some labeled crops is effective. Callisto/Impact/Laudis - Add MSO at 1.5 pt/A Roundup, atrazine, paraquat are less effective. Pursuit is not effective. Most herbicides listed have rotational crop restrictions. Follow label guidelines. Python/Spartan/Valor = PRE control.
<b>Nightflowering catchfly/ White cockle</b>	Tribenuron + NIS> Trib + thifensulfuron <sup>2*</sup> + NIS Huskie <sup>6,27</sup> (not confirmed)	DF or SG - See label for rate. DF or SG - See label for rate. 15 fl oz	Add NIS at 1 qt/100 gal water. Apply to small plants. Add NIS at 1 qt/100 gal water. Apply to small plants. Huskie also controls other cockle species.
<b>Sowthistle (Ann. or perennial)</b>	Ally <sup>2*</sup> + MSO Express <sup>2*</sup> + MSO	1/10 oz DF + 1.5 pt/A DF or SG - See label for rate.	Apply with 2,4-D or Banvel. 2,4-D, Banvel, Curtail, and Roundup applied alone are less effective.
<b>Waterpod</b>	2,4-D <sup>4</sup> , Pursuit <sup>2</sup> or SU <sup>2</sup> s	See label.	See Pursuit label for crop rotation restrictions.
<b>Wild cucumber</b>	Dicamba <sup>4</sup> + MSO Glyphosate <sup>9</sup> + NIS + AMS	0.5 to 1.5 pt/A 1 qt/A + 1 qt/100+8.5 lbs/100	Banvel may injure or kill trees. Mechanical control or handweed is best. Banvel may injure trees. A3-8
<b>Yellow nutsedge</b>	Permit <sup>2</sup> + MSO Basagran <sup>5</sup> + MSO	0.67 fb 0.67 oz + 1.5 pt/A 1.5 pt fb 1.5 pt + 1.5 pt/A	Pursuit, Dual, Roundup are less effective. Permit may injure crops planted the following years.

\* Or generic equivalent